Claims

1. Process for producing hollow bodies, especially plastic bottles, in which a segment of a plastic tube (T) is placed in a cavity (7) of a blow molding tool arrangement (6) by the extruder head (4) in a definable cycle, the plastic tube (T) is inflated via a blowing mandrel (11) by overpressure according to the blow molding cavity (7), and the hollow body (B) is removed from the mold, characterized in that the plastic tube (T) is continuously held during the entire extrusion and blowing cycle on the opposing sides of the blow molding tool arrangement (6).

2. Process as claimed in claim 1, wherein the plastic tube (T) after inflation of the hollow body (B) is separated on the side of the blow molding tool arrangement (6) facing away from the extruder head (4).

3. Process as claimed in claim 1 or 2, wherein the blow molding tool arrangement (6) relative to the direction of motion of the plastic tube (T) is located between the extruder head (4) and the blowing mandrel (11) which can be transported for inflation of the plastic tube (T) into the mouth (10) of the blow molding cavity (7) which is located on the side of the blow molding tool arrangement (6) facing away from the extrusion nozzle (5).

4. Process as claimed in claim 3, wherein for each blow molding cavity (7) there are two or more blowing mandrels (11) which are transported in alternation into the blow molding cavity (7).

5. Process as claimed in claim 4, wherein for the blow molding cavity (7) there are two or more blowing mandrels (11) which are mounted on a central blowing mandrel support (16) such that they are used in succession by rotation of the blowing mandrel support (16).

6. Process as claimed in claim 4 or 5, wherein each blowing mandrel (11) is provided with a

calibration means with which the opening of the blown hollow body (B) is calibrated during the blowing process.

7. Process as claimed in one of the preceding claims, wherein the plastic tube is continuously extruded and after transfer of the extruded plastic tube (T) to the blow molding cavity (7) and during the blowing process, the relative distance between the extruder head (4) and the blow molding tool arrangement (6) is increased.

8. Process as claimed in claim 7, wherein the distance is changed by moving the extrusion head (4) away from the blow molding tool arrangement (6) which is essentially stationary with respect to its location.

9. Process as claimed in claim 7 or 8, wherein the change in distance takes place with a speed which is greater than or equal to the exit speed of the plastic tube from the extrusion nozzle (5) of the extruder head (4).

10. Process as claimed in one of claims 1-6, wherein the extruder head is made as a breaker head with an extrusion nozzle with which the plastic tube is discontinuously ejected into the blow molding cavity of the blow molding tool arrangement and wherein during ejection of the plastic tube the relative distance of the blowing mandrel from the breaker head is increased.

11. Process as claimed in claim 10, wherein the rate of change of the distance of the blowing mandrel from the breaker head is greater than or equal to the ejection speed of the plastic tube from the extrusion nozzle.

12. Process as claimed in one of the preceding claims, wherein the plastic tube is inclined relative to its extrusion direction during the production cycle.

13. Process as claimed in one of the preceding claims, wherein the blow molding tool

arrangement (6) comprises at least two mold parts (8, 9) which can be separated from one another, and which are moved for opening and closing the blow molding tool (6) essentially perpendicular to the extrusion direction of the plastic tube out of an open end position into a closed end position and vice versa.

14. Process as claimed in one of the preceding claims, wherein an extruder head (4) with a multiple extrusion nozzle tool is used, a blow molding tool arrangement (6) is used which is equipped with a corresponding number of blow molding cavities (7), and there are a number of blowing mandrels (11) which is preferably one or more times the number of blow molding cavities (7) and which can be transported into the mouths (10) of the blow molding cavities (7) for inflating the plastic tubes (T).

15. Process as claimed in one of the preceding claims, wherein the discharge rate of the plastic tube, the extruder head motion, the blowing mandrel motion, the adjustment motion of the width of the extrusion nozzle and the opening and closing motion of the blow molding tool arrangement can be adjusted individually and matched to one another.

16. Process for producing hollow bodies (B), especially plastic bottles, with an extruder head (4) which is located in an equipment frame with an extrusion nozzle (5), a blow molding tool arrangement (6) with a blow molding cavity (7), with at least one blowing mandrel (11) and at least one separation means (17) for the plastic tube (T), wherein on the opposing sides of the blow molding tool arrangement (6) there are holding means for the plastic tube (T) and the separating means is located on the side of the blow molding tool arrangement (6) facing away from the extruder head (4).

17. Device as claimed in claim 16, wherein the holding means for the plastic tube (T) are on

the one hand the extruder head (4) and on the other hand the blowing mandrel (11).

18. Device as claimed in claim 16 or 17, wherein the blow molding tool arrangement (6) is located between the extruder head (4) and the blowing mandrel (11), and the blow molding cavity (7) on the side of the blow molding tool arrangement (6) facing away from the extrusion nozzle (5) has a mouth (10) through which the blowing mandrel (11) can be transported into the blow molding cavity (7).

19. Device as claimed in claim 18, wherein for each blow molding cavity (7) there are two or more blowing mandrels (11) which are transported in alternation into the blow molding cavity (7).

20. Device as claimed in claim 19, wherein the blowing mandrels (11) are mounted on a central blowing mandrel support (16) and can be used in succession by rotation of the blowing mandrel support (16).

21. Device as claimed in one of claims 16-20, wherein each blowing mandrel (11) is provided with a calibration means with which the opening of the blown hollow body (B) can be calibrated during the blowing process.

22. Device as claimed in one of claims 16-21, wherein there are actuating means with which the relative distance between the extruder head (4) and the blow molding tool arrangement (6) can be adjusted.

23. Device as claimed in claim 22, wherein the actuating means are connected to the extruder head (4).

24. Device as claimed in claim 16-23, wherein the extruder head (4) is made for continuous extrusion of the plastic tube (T).

25. Device as claimed in one of claims 16 to 23, wherein the extruder head is made as a breaker head for discontinuous ejection of the plastic tube, and the distance of at least one blowing mandrel at least with the ejection speed of the plastic tube can be adjusted relative to the blow molding tool arrangement.

26. Device as claimed in one of claims 16-25, wherein the extruder head (4) has an essentially vertically aligned extrusion nozzle (5) and the blow molding tool arrangement (6) and at least one blowing mandrel (11) are arranged vertically under one another.

27. Device as claimed in one of claims 16-26, wherein the blow molding tool arrangement (6) comprises at least two mold parts (8, 9) which can be separated from one another and which are moved for opening and closing the blow molding tool essentially perpendicular to the extrusion direction of the plastic tube (T) out of an open end position into a closed end position and vice versa.

28. Device as claimed in one of claims 16-27, wherein the extruder head (4) has several extrusion nozzles (5), the blow molding tool arrangement (6) is equipped with a corresponding number of blow molding cavities (7), and there is a number of blowing mandrels (11) which is one or more times the number of blow molding cavities (7).